

CROSS SECTION

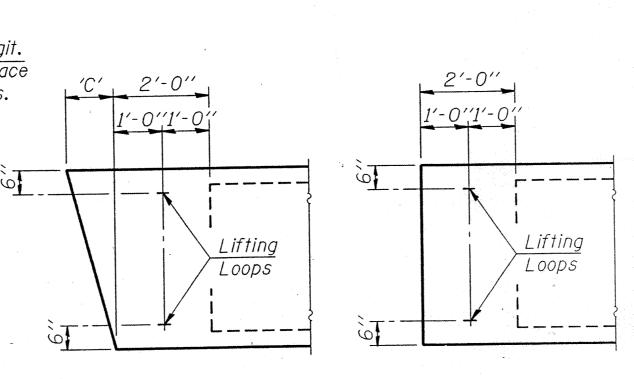
(50' SPAN)

Illinois Department of Transportation PASSED NOVEMBER I, 1995 Oraj O Kaspar Engineer of Bridge Design APPROVED NOVEMBER I, 1995

Engineer of Bridges and Structures

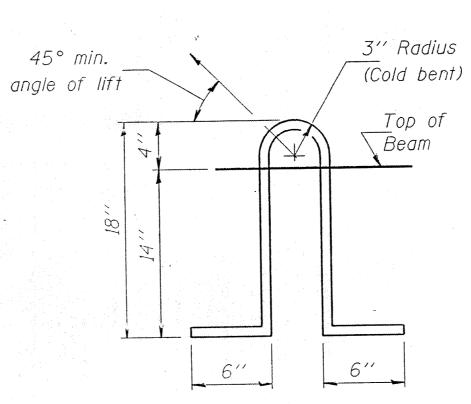
NOTE

The std. reinf. shown on the 30' span cross section is typical for all spans, except as shown.



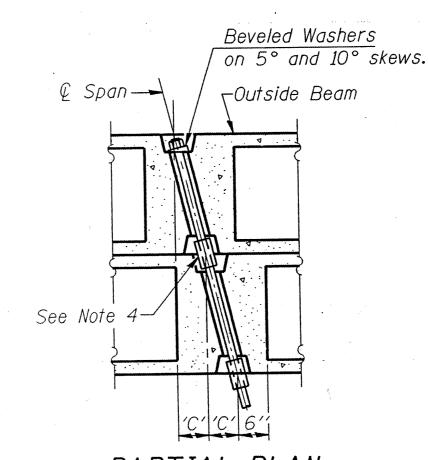
END BLOCK DETAILS

Each beam shall have four Lifting Loops, two at each end of beam cast in locations shown above. Loops shall be burned off after beams have been erected.



LIFTING LOOP DETAIL

Lifting loops shall be 2, $\frac{1}{2}$ " ϕ -270 ksi strands, as shown. Alternate approved lifting devices are also acceptable.



PARTIAL PLAN TRANSVERSE TIE ASSEMBLY ('D'=0°, 5° and 10°)

segmental length are acceptable.

€ Span → -Outside Beam PARTIAL PLAN

SECTION

91-00140-00-BR JEFFERSON JEFFERSON COUNTY ROAD DISTRICT

TOT. SHTS. SHT.

TRANSVERSE TIE ASSEMBLY ('D'=15°, 20°, 25° and 30°)

Full Threaded Sleeve 4" long.

 $4''x4''x^{l_2}$ " R Washer for 0°, 15°, 20°, 25° and 30° Skews $4''x4''x^{l_2}$ " (min.) Beveled Plate Washer for 5° and 10° Skews

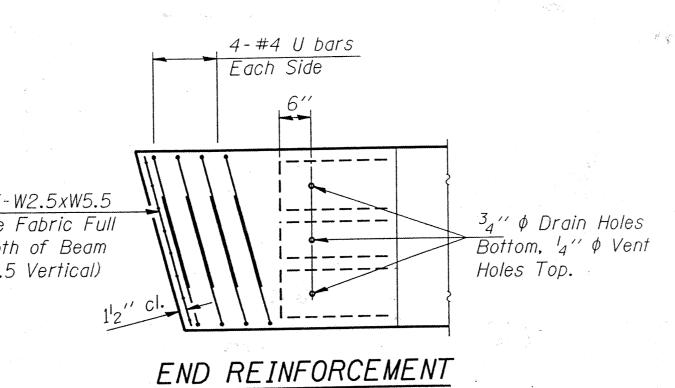
See Note 4

1" φ x 3'-11" Rods

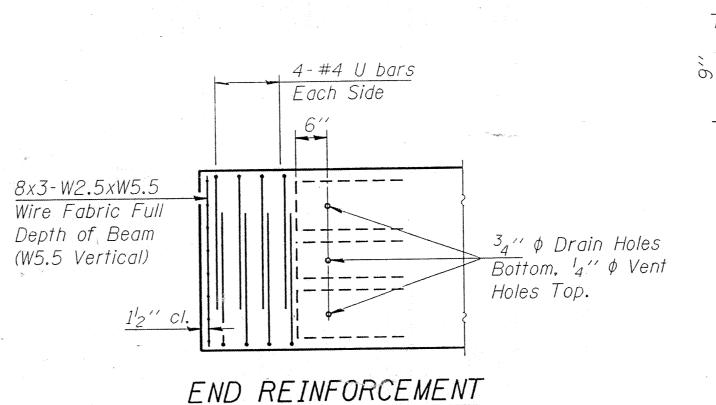
-(Thread Each End 4'')

DIMENSION 'C'

Skew Angle 'D'	0°	5°	10°	15°	20°	25°	30°
Dimension 'C' (Inches)	0	41/4	812	12 ⁷ 8	17 ¹ 2	2238	273



(SKEWED)



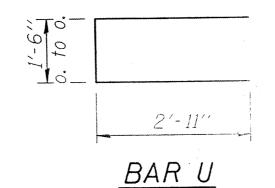
(RIGHT ANGLE)

Nut for 1" \$ Rod See Note 4 SECTION ALONG TRANSVERSE TIE ASSEMBLY (REQUIRED FOR 50' SPAN ONLY)

NOTES

└─3" ¢ Opening

- 1. Prestressing steel shall be uncoated high strength, stress relieved 7-wire strand. Grade 270.
- 2. The nominal diameter shall be $^{l}_{2}{}^{\prime\prime}$ and the nominal cross-sectional area shall be 0.153 square inches.
- 3. Reinforcement bars shall conform to AASHTO M-31, M-42 or M-53, Grade 60. 4. On 0°, 5° and 10° skews, alternate approved transverse tie rods of increased
- 5. Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
- 6. When Waterproofing Membrane System is specified, the top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of $\frac{1}{4}$ ".
- 7. Low-relaxation strands may be substituted for the stress relieved strands. The initial prestressing force applied to each strand shall be the same as for the stress relieved strands (28,900 lbs.).
- 8. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.



DESIGN STRESSES

f'_c = 5,000 p.s.i.

f'_{ci} = (See Required Release Strength Table)

 $f'_{s} = 270,000 \text{ p.s.i. } (\frac{1}{2}'' \phi \text{ Strand})$

 $f_{si} = 189,000 \text{ p.s.i. } (\frac{1}{2} \% \text{ Strand})$

fy = 60,000 p.s.i.

REQUIRED RELEASE STRENGTH

Span Span	f'ci (psi)	-
30'	4,000	
. 35′	4,000	
40′	4,000	
50′	4,000	**

P.P.C. DECK BEAM DETAILS 21" x 48" BEAMS 28' ROADWAY STANDARD CB-2821-48